

VU Research Portal

Building a sustainable start

Blokker, R.; Akkermans, J.; Tims, M.; Jansen, Paul; Khapova, S.N.

published in

Journal of Vocational Behavior
2019

DOI (link to publisher)

[10.1016/j.jvb.2019.02.013](https://doi.org/10.1016/j.jvb.2019.02.013)

document version

Publisher's PDF, also known as Version of record

document license

Article 25fa Dutch Copyright Act

[Link to publication in VU Research Portal](#)

citation for published version (APA)

Blokker, R., Akkermans, J., Tims, M., Jansen, P., & Khapova, S. N. (2019). Building a sustainable start: The role of career competencies, career success, and career shocks in young professionals' employability. *Journal of Vocational Behavior*, 112, 172-184. <https://doi.org/10.1016/j.jvb.2019.02.013>

General rights

Copyright and moral rights for the publications made accessible in the public portal are retained by the authors and/or other copyright owners and it is a condition of accessing publications that users recognise and abide by the legal requirements associated with these rights.

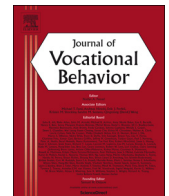
- Users may download and print one copy of any publication from the public portal for the purpose of private study or research.
- You may not further distribute the material or use it for any profit-making activity or commercial gain
- You may freely distribute the URL identifying the publication in the public portal ?

Take down policy

If you believe that this document breaches copyright please contact us providing details, and we will remove access to the work immediately and investigate your claim.

E-mail address:

vuresearchportal.ub@vu.nl



Building a sustainable start: The role of career competencies, career success, and career shocks in young professionals' employability

Rowena Blokker*, Jos Akkermans, Maria Tims, Paul Jansen, Svetlana Khapova

Vrije Universiteit Amsterdam, School of Business and Economics, De Boelelaan 1105, 1081 HV Amsterdam, the Netherlands

ARTICLE INFO

Keywords:

Young professionals
Career Construction Theory
Career competencies
Career shocks
Career success
Perceived employability

ABSTRACT

Despite the established view that investing in developing one's career competencies would lead to career success and employability, little is known about the role of career shocks (i.e., positive and negative unexpected career-related events) in this relationship. To examine the role of career shocks in the relationship between career competencies, career success and employability, we analyzed data from 704 Dutch young professionals (21–35 years). Results showed that young professionals who have developed high levels of career competencies reported higher levels of perceived employability. The relationship between career competencies and perceived employability was partially mediated by subjective career success (i.e., career satisfaction). Negative career shocks undermined the mediated relationship between career competencies and perceived employability, via early career success, whereas positive career shocks strengthened this relationship. This study contributes to the literature on employability by demonstrating that career shocks play an important role in young professionals' early career development in tandem with career competencies and career success.

1. Introduction

In the contemporary world of work, job security and lifetime employment are no longer the norm (e.g., Hall & Heras, 2010). For young professionals, this means a necessity to continuously appraise their situation and be aware of their employment opportunities while constructing their careers (McDonald, 2018; Tomlinson, Baird, Berg, & Cooper, 2018). Consequently, employability has become one of the most important outcomes of contemporary careers (Wille, De Fruyt, & Feys, 2013) as well as one of the leading research topics in the careers literature (Akkermans & Kubasch, 2017). Scholars note that individuals should build and maintain their employability early in their careers (Bridgstock, 2009; Fugate, Kinicki, & Ashforth, 2004), as it is the foundation of current and future opportunities on the labor market (e.g., Rothwell & Arnold, 2007).

Previous studies have identified career resources such as career competencies (Eby, Butts, & Lockwood, 2003) and movement capital (Forrier, Sels, & Stynen, 2009) as predictors of employability (Hirschi, 2012). However, whereas the need for individuals to actively construct their careers to become employable has been clearly documented in the scholarly discussion (Eby et al., 2003; Forrier, Verbruggen, & De Cuyper, 2015), the context in which career development takes place has largely been ignored (Mayrhofer, Meyer, & Steyrer, 2007). This lacunae of empirical research is surprising considering that theoretical perspectives on career development have considered the role of context (e.g., sustainable careers, De Vos, Van Der Heijden, & Akkermans, 2018; Career Construction Theory, Savickas, 2002), and recent calls from career scholars indicate that the context in which careers take place can have

* Corresponding author.

E-mail addresses: r.blokker@vu.nl (R. Blokker), j.akkermans@vu.nl (J. Akkermans), m.tims@vu.nl (M. Tims), p.g.w.jansen@vu.nl (P. Jansen), s.n.khapova@vu.nl (S. Khapova).

<https://doi.org/10.1016/j.jvb.2019.02.013>

Received 4 October 2018; Received in revised form 24 February 2019; Accepted 26 February 2019

Available online 27 February 2019

0001-8791/ © 2019 Elsevier Inc. All rights reserved.

a major impact on career development (e.g., Inkson, Gunz, Ganesh, & Roper, 2012). Therefore, the current study takes a contextualized approach to career research by examining the role of so-called *careers shocks* (Akkermans, Seibert, & Mol, 2018) in the relationship between young professionals' career competencies, career success, and employability.

A career shock is defined as “a disruptive and extraordinary event that is caused by factors outside the focal individual's control and that triggers a deliberate thought process concerning one's career” (Akkermans et al., 2018, p. 4). Most people encounter career shocks in their careers, and career shocks can significantly influence the career development process (e.g., Bright, Pryor, Chan, & Rijanto, 2009; Krumboltz, 1998). Recent studies have demonstrated that career shocks can alter young professionals' career pathways (Hirschi, 2010) and, for instance, increase the likelihood of young professionals applying for graduate school (Seibert, Kraimer, Holtom, & Pierotti, 2013). These studies suggest that career shocks impact young professionals' efforts to build their employability.

In the present study, we propose a moderated mediation model in which the degree to which young professionals are able to develop their employability depends on the career competencies they possess, the intermediate career success they have achieved, and the career shocks they have encountered. This study contributes to the literature on employability by filling two theoretical gaps. First, we contribute to the scholarly debate on predictors of young professionals' employability by examining the role of career competencies in achieving subjective and objective career success and, subsequently, perceived employability. Second, we extend previous literature on career shocks by shedding light on if and how negative and positive career shocks relate to young professionals' career success and employability.

1.1. Career competencies and perceived employability

Perceived employability is defined as the individual's perception of employment opportunities with the current (i.e., internal) or another (i.e., external) employer (De Cuyper & De Witte, 2008, 2011). While much research has been conducted among university students (e.g., Tomlinson & Holmes, 2017) and mature workers (e.g., De Cuyper & De Witte, 2011), little is known about the employability of young professionals. Because employability is crucial for young employees to lay the foundation for a sustainable and successful career (Bridgstock, 2009; De Vos et al., 2018), young professionals are an important group to study.

1.1.1. Career Construction Theory

We draw on Career Construction Theory (CCT; Savickas, 2002, 2005) to examine the role of career competencies in achieving career success and, subsequently, perceived employability among young professionals. CCT conceptualizes career development as an action-oriented process during which individuals build a career and design their life. The theory posits that individuals actively apply career resources to meet the demands imposed by dynamic work environments and to navigate contextual opportunities and constraints. According to this framework, successful career development is a continuous process of adaptation that results from person-environment integration (i.e., career adaptability), and the context in which career development takes place provides the boundary conditions that frame how people construct their careers (Savickas, 2002, 2005).

Given the need for individuals to actively construct their careers, while at the same time effectively responding to the opportunities and challenges evoked by the environment, it is important to acquire career resources (Savickas & Porfeli, 2012). Career competencies have been identified as a beneficial career resource for attaining early career success (e.g., Hall, 2004). For instance, by developing career competencies, young professionals make sense of their personal qualities and motivations and can form strategies to efficiently accomplish their career goals during the transition to working life (Akkermans, Brenninkmeijer, Huibers, & Blonk, 2013). In turn, these career resources help young professionals to more efficiently navigate the contemporary world of work, and subsequently make them better able to develop and maintain their employability (e.g., Bridgstock, 2009; Forrier & Sels, 2003).

1.1.2. Career competencies as predictor of perceived employability

Career competencies are defined as “knowledge, skills, and abilities central to career development, which can be influenced by the individual” (Akkermans et al., 2013, p. 249), and consist of three domains: reflective, communicative, and behavioral career competencies. Reflective career competencies refer to an individuals' awareness of one's motivation and qualities, which includes reflecting on values, motivations, strengths, and shortcomings with regard to one's career. Communicative career competencies refer to being able to effectively communicate to improve one's chances of career success, which includes building and expanding a network for career-related purposes and communicating personal knowledge, abilities, and skills to the labor market by self-profiling. Behavioral career competencies refer to being able to shape one's career by actively exploring the environment in terms of employment and career opportunities, and to proactively plan and achieve career goals.

Young professionals with better developed career competencies will have a clearer idea about their vocational self-concept (e.g., motivations and qualities), thereby allowing them to develop and implement this self-concept into various occupational roles (cf. Savickas, 2002). Moreover, career competencies help individuals to explore alternative possibilities on the labor market and to exert control over their career, which subsequently enhances perceptions of employability (Forrier et al., 2015; Savickas, 2002). Previous studies have indeed established that career competencies are beneficial for young professionals' career development (e.g., Eby et al., 2003) as these competencies make them better able to employ adaptive behaviors (Parker, Khapova, & Arthur, 2009), add value to their organization (Fleisher, Khapova, & Jansen, 2014), and to be successful (Colakoglu, 2011; Eby et al., 2003). In addition, recent studies have demonstrated a direct and positive relationship between young professionals' career competencies and their perceptions of internal and external employability (Akkermans, Brenninkmeijer, Schaufeli, & Blonk, 2015; Akkermans & Tims, 2017; De Vos, De Hauw, & Van der Heijden, 2011; Wittekind, Raeder, & Grote, 2010). Based on these findings, and in line with CCT, we hypothesize the following:

H1. Young professionals' career competencies are positively related to (a) perceived internal employability and (b) perceived external employability.

1.2. Career competencies and employability: the mediating role of career success

Young professionals' mastered career competencies are career resources that they can use to achieve early career success (Arthur, Khapova, & Wilderom, 2005; Bridgstock, 2009). Career success is defined as the accomplishment of desirable work-related outcomes over time (Arthur et al., 2005). A theoretical distinction can be made between subjective and objective career success (e.g., Arthur et al., 2005; Spurk, Hirschi, & Dries, 2018). Subjective career success refers to the individual's self-evaluation of career progress and feelings of satisfaction and accomplishment (e.g., career satisfaction, Heslin, 2005). Objective career success refers to tangible and verifiable indicators of an individual's career, such as salary, hierarchical position, promotions, and status (Arthur et al., 2005).

According to CCT, individuals construct their careers by imposing personal meaning on past and present experiences, and future aspirations. This process of self-construction is conditional upon the availability of adequate skills and knowledge (Savickas, 2002, 2005). In line with CCT, many studies have demonstrated that individuals with well-developed career competencies achieve more subjective career success (e.g., Colakoglu, 2011; De Vos et al., 2011; Eby et al., 2003), and objective career success (e.g., Francis-Smythe, Haase, Thomas, & Steele, 2013; Kuijpers & Scheerens, 2006; Van der Heijde & van der Heijden, 2006). In addition, a recent review of theoretical approaches to study career success showed that career success attained in the past can help people to attain further career goals (Spurk et al., 2018). More specifically, intermediately attained career success can function as a signal of value to other people and favorably influence how young professionals are treated by their environment, thus enhancing their employability as a consequence of prior career success experiences (Hobfoll, Halbesleben, Neveu, & Westman, 2018). Indeed, successful people tend to more often receive new opportunities for career development compared to their less successful counterparts (e.g., Singh, Ragins, & Tharenou, 2009). It is thus likely that the subjective and objective career success young professionals have attained up until now may serve as input for their perceptions of future employment opportunities.

Based on these findings, and in line with CCT, we argue that young professionals who are highly career competent, will perceive themselves as more employable through experiencing more career success. Therefore, we consider career success as a mediating factor that facilitates the process of becoming employable (Forrier et al., 2015). Because prior studies (e.g., De Vos et al., 2011; Francis-Smythe et al., 2013) have found support for direct relationships between career competencies and perceived employability, we test a partial mediation.

H2. Young professionals' (a) subjective career success and (b) objective career success partially mediate the relationship between career competencies and perceived employability.

1.3. Career competencies and employability: the moderating role of career shocks

Despite the fact that person-environment interactions play a central role in CCT, little is known about how major career events, which we refer to as career shocks (Akkermans et al., 2018; Seibert et al., 2013), impact young professionals' efforts to construct their careers (Bright, Pryor, & Harpham, 2005). CCT posits that career construction is an agentic process in which individuals who possess career resources are better able to construct their careers effectively. In addition, CCT states that this agentic process can be influenced by the individual's environment, such that these environmental factors interact with an individual's career resources. In our study, this means that the agentic career competencies – career success – perceived employability process can be different when major career events in one's environment occur. In other words, career shocks are likely to moderate the indirect relationship between career competencies and perceived employability via career success (Savickas, 2002, 2005). Other theories on person-environment interactions also consider the individual as the central actor (e.g., sustainable careers; De Vos et al., 2018), and argue that the context in which careers take place poses constraints and opportunities that affect attitudes and behaviors. Taken together, we argue based on CCT and other person-environment fit perspectives that the central agentic mediation process between career competencies and employability can be conditional upon career shocks.

Career shocks are considered to be relatively infrequent and extraordinary events that vary in controllability and predictability, and can be either negatively or positively appraised by the individual (Akkermans et al., 2018). For example, having one's contract terminated can be classified as a negative career shock, whereas receiving an unexpected raise or promotion can be classified as a positive career shock. In previous studies on career shocks, negative career shocks have generally been associated with negative outcomes and positive career shocks with positive outcomes (e.g., Baruch & Lavi-Steiner, 2015; Seibert et al., 2013), yet it remains unclear if and how negative and positive career shocks relate to employability (Akkermans et al., 2018).

Career shocks, by definition, instigate a deliberate thought process concerning one's career (Akkermans et al., 2018). Following from this, and in line with CCT, we argue that career shocks may incite young professionals to revise their vocational self-concept and reevaluate their career development process (Chen, 2005). For instance, young employees who have a clear idea about their qualities and motivation and who unexpectedly receive a raise or promotion (i.e., positive career shock), are likely to feel even more confident in achieving their preferred career goals and this subsequently could be positively related to perceptions of employability. Indeed, Baruch, Wordsworth, Mills, and Wright (2016) showed that career shocks incite people to reflect critically on their career development process and subsequently alter their evaluations of future career opportunities. Furthermore, in contrast to positive career shocks, negative career shocks appear to undermine an individuals' career decision making process and career progress (e.g.,

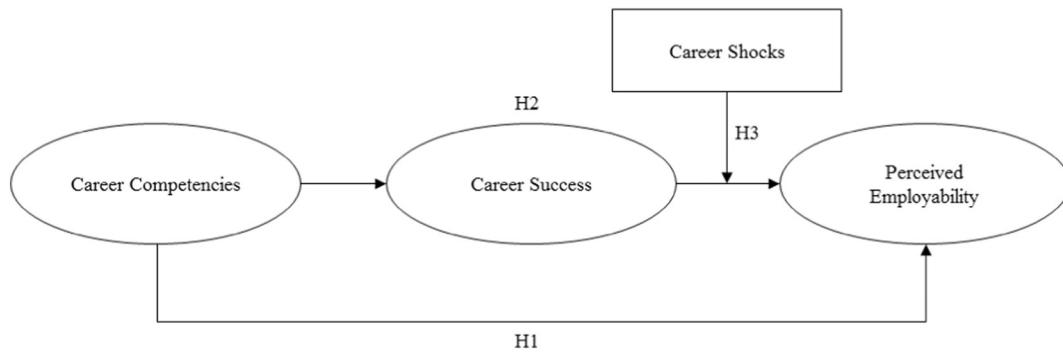


Fig. 1. Hypothesized moderated mediation model.

Grimland, Vigoda-Gadot, & Baruch, 2012; Seibert et al., 2013). Thus, it seems likely that how young professionals appraise their career success, and subsequently evaluate their opportunities on the labor market, can differ based on the career shocks they encounter.

Taken together, we argue that the mechanism through which career competencies are related to perceived employability will be moderated by career shocks. In line with CCT and previous studies (e.g., Grimland et al., 2012; Hirschi, 2010), we argue that career shocks act as moderators that shape young professionals' efforts to build their perceived employability through the development of career competencies and career success. Given that career shocks incite young professionals to (re)appraise their career development, we expect that the impact of career shocks will be most pronounced for the career success – perceived employability link. In sum, we propose a moderated mediation model in which the strength of the indirect relationship between career competencies and perceived employability through career success depends on the career shocks young professionals encounter (see Fig. 1 for the full hypothesized model).

H3a. The indirect relationship between career competencies and perceived employability via career success is moderated by career shocks, such that the relationship is weaker with increasing levels of negative career shocks.

H3b. The indirect relationship between career competencies and perceived employability via career success is moderated by career shocks, such that the relationship is stronger with increasing levels of positive career shocks.

1.4. Young professionals in the Netherlands

This study was performed among Dutch young professionals. The Dutch labor market is a postmodern work environment with a so-called occupational labor market structure characterized by high vocational specificity. Specifically, the educational system is structured to attain certain professional occupations (e.g., accountant, lawyer, IT consultant). Although matches between educational qualifications and jobs are tight, work arrangements are becoming increasingly flexible (e.g., temporary contracts and self-employment) and jobs are typically not bounded to organizations (Chkalova, van Genabeek, Sanders, & Smits, 2017). Also, Dutch individuals have switched jobs more often in the past 10 years, and this is especially true for young professionals: in 2016, over 25% of Dutch young professionals switched jobs, compared to 11% of workers between 25 and 45, and 4% of workers between 45 and 75 (Chkalova et al., 2017). Relating this to our application of CCT in this study, it means that the core assumption of CCT that individuals need to proactively navigate dynamic work environments to build and advance their careers (Savickas, 2005), is especially relevant for Dutch young professionals. European countries with a similar labor market structure are Germany, Austria, Switzerland, and Denmark. In contrast, Finland, Sweden, Belgium, France, Ireland, and the UK have flexible labor market systems characterized by entrants with general qualifications (Müller & Gangl, 2003). Compared to flexible labor markets, studies indicate that young professionals integrate more smoothly into occupational labor markets (e.g., Gangl, 2002).

Furthermore, the Dutch labor market provides a good opportunity to study employability among young professionals, as their relative number on the labor market has clearly increased: in 2005, roughly 7.5% of young workers was highly educated, whereas in 2015 this percentage had gone up to almost 10%, on a total working population that increased over 13% (Statistics Netherlands, 2018). Unemployment rates among Dutch young people are low (i.e., Europe = 9.1% vs. the Netherlands = 4.9%), and have been decreasing over the past years from 7.4% in 2014 to 4.9% in 2017 (Eurostat, 2018). Thus, in general, the Dutch labor market is healthy and young professionals have ample opportunities to construct their careers.

2. Method

2.1. Sample and procedure

Our study was part of a project that aimed to help Dutch young professionals gain insights in their employability. A large number of Dutch young professionals were invited to participate in the study via several online platforms (e.g., 4YoungPeople and

Careerwise), newsletters, and social media (i.e., LinkedIn, Facebook, and Twitter). The majority of the participating young professionals were members of informal networks that aim to exchange career-related information. Participation was voluntary. In total, 3663 participants responded to the invitation, of which 947 participants (25.8%) finalized the questionnaire. Because this study is primarily focused on the careers of young professionals, participants were excluded if they were > 35 years of age ($n = 106$), unemployed ($n = 58$), or self-employed ($n = 53$) at the time of the study. We inspected the data for outliers and missing data. No influential univariate outliers were identified. Mahalanobi's distance was computed to identify multivariate outliers, resulting in the elimination of 25 cases (all p 's < .001). To preserve data quality, we excluded one unengaged participant with no variation in his/her response pattern. Lastly, four variables contained missing values, all < 5% missing, which we replaced with the median for ordinal scales and the mean for continuous scales (Downey & King, 1998).

The final sample ($n = 704$) consisted of 520 women (73.9%), with a mean age of 29.4 years ($SD = 3.2$, range 21–35). Most participants completed higher vocational (36.4%) or university level (57.2%) education. Participants worked on average 39.2 hours a week ($SD = 7.6$), with an average organizational tenure of 3.3 years ($SD = 2.8$) and 6.9 years of work experience ($SD = 3.8$). Lastly, participants worked in various occupational fields, such as government (13.2%), consultancy (11.2%), education and research (10.5%), healthcare (9.1%), information and communication technology (ICT; 7.4%), communication and media (7.2%), financial services (6.1%), and industry (6.1%).

2.2. Measures

The questionnaires were administered in Dutch. The reliability and validity of the Dutch versions of the career competencies, career success, and perceived employability scales have been extensively demonstrated among Dutch samples (e.g., Akkermans et al., 2013, 2015; De Cuyper & De Witte, 2008, 2010; De Vos et al., 2011). The career shocks items were translated to Dutch in collaboration with the lead author of the original scale using the translation back-translation method (Beaton, Bombardier, Guillemin, & Ferraz, 2000; Brislin, 1970). All items were measured on a 5-point Likert scale ranging from 1 (*strongly disagree*) to 5 (*strongly agree*), except where noted.

Career competencies were measured with the 21-item Career Competencies Questionnaire (CCQ; Akkermans et al., 2013). Reflective career competencies (e.g., “I can clearly see what my passions are in my work”, $\alpha = 0.79$), communicative career competencies (e.g., “I am able to approach the right persons to help me with my career”, $\alpha = 0.79$), and behavioral career competencies (e.g., “I am able to explore my possibilities on the labor market”, $\alpha = 0.85$) were each assessed with seven items. The CCQ has received elaborate psychometric support (e.g., Akkermans et al., 2013, 2015).

Subjective career success was measured using the career satisfaction scale (Greenhaus, Parasuraman, & Wormley, 1990). Participants rated their agreement with five statements on career satisfaction (e.g., “I am satisfied with the success I have achieved in my career”, $\alpha = 0.85$). The reliability of this scale in our study is similar to the reliability reported by most other studies (average $\alpha = 0.83$; Ng & Feldman, 2014).

Objective career success was measured with three self-reported variables: (a) salary, (b) promotions, and (c) positive performance appraisals. First, participants' *gross monthly salary* was assessed in euros (Judge, Higgins, Thoresen, & Barrick, 1999). On average, participants' gross monthly salary was €2819 ($SD = 908.78$, range 260–7500). Responses were categorized into 15 equal steps ranging from “€1–€500” coded as 1, to “€7,001–€7,500” coded as 15. Second, participants were asked to indicate the *number of promotions* they received in their careers. On average participants received 1.6 promotions ($SD = 1.6$, range 0–12). Third, given that young professionals have typically not experienced many formal promotions (e.g., Stumpf, 2014), and the current sample only had a few years of work experience, participants were asked to indicate the *number of positive performance appraisals* they received in their careers as an alternative measure for the number of promotions. Indeed, compared to formal promotions, participants received more positive performance appraisals ($M = 4.6$, $SD = 3.3$, range 0–20). Because positive performance appraisals and promotions are inherently related (Cleveland, Murphy, & Williams, 1989), we added the relationship between performance appraisals and promotions in our analyses.

Career shocks were measured with three items each for negative and positive career shocks. Participants rated the degree to which each career shock impacted their career on a 5-point scale ranging from 0 (have not experienced the event; and thus, had no impact) to 4 (had a large impact). Four items were taken from Seibert et al. (2013), who identified two negative (e.g., “Your organization went through a significant negative event such as a reduction-in-workforce, bankruptcy, or major ethical scandal”) and two positive career shocks (e.g., “You received a pay raise, promotion, or desirable increase in responsibility sooner than expected”) directly related to the early career development of young professionals. On the basis of conversations with a large group of young professionals, two frequently reported additional career shocks were identified as relevant for young professionals' early career development: one item for a negative career shock (i.e., “You were overwhelmed at your first job by all the new responsibilities and tasks you were confronted with”), and one item for a positive career shock (i.e., “After completing your education, you found your first job faster than expected”). Each career shock was experienced by at least 49.4% of the participants.

To allow for combined effects of career shocks on perceived employability (Guindon & Hanna, 2002; Holtom, Mitchell, Lee, & Inderrieden, 2005), we created two count variables capturing the aggregated scores for negative career shocks and positive career shocks, respectively. Scores ranged from 0 to 12, with a low score representing a low number of shocks experienced with minimal impact, and a high score representing a high number of shocks experienced with a large impact. Due to the nature of these two variables, no reliability coefficients were obtained.

Perceived employability was measured with eight items that reflect internal and external employability (De Cuyper & De Witte, 2008, 2010). Perceived internal employability was measured with four items (e.g., “In my current job, I am able to perform different

types of tasks”, $\alpha = 0.83$). Perceived external employability was measured with four items (e.g., “I would find another job rather quickly if I searched for it”, $\alpha = 0.84$). This scale has been found reliable and valid in a large European project among workers from different sectors (Guest, Isaksson, & De Witte, 2010) and in other studies using Dutch samples (e.g., De Cuyper, Bernhard-Oettel, Berntson, Witte, & Alarco, 2008; De Cuyper, Van der Heijden, & De Witte, 2011).

2.3. Analysis strategy

The hypothesized moderated mediation model was tested using the latent moderated structural equations (LMS) method (Maslowsky, Jager, & Hemken, 2015) in Mplus Version 7.31 (Muthén & Muthén, 2015). Compared to other regression-based moderation approaches (e.g., Edwards & Lambert, 2007), the advantages of this approach are that LMS estimates multiple latent interaction effects simultaneously in one model and produces unbiased, efficient parameter estimates (paths) between the variables that are robust to nonlinearity and deviations from normality of the latent variables (Klein & Moosbrugger, 2000).

Prior to estimating the structural models, we conducted confirmatory factor analyses (CFA) to ensure the fit of the measurement model. For subjective career success, internal employability, and external employability, the scale items were treated as indicators of their respective latent construct. The latent construct career competencies consisted of three indicators based on scale means (i.e., reflective, communicative, and behavioral competencies). Salary, promotions, positive performance appraisals, negative career shocks, and positive career shocks were included as manifest variables. Model fit was evaluated using the chi-square statistic (χ^2), the Comparative Fit Index (CFI), Tucker-Lewis index (TLI), Root Mean Square Error of Approximation (RMSEA), and Standardized Root Mean Square Residual (SRMR). In line with conventional cut-off values of these fit indices, we considered the model fit to be acceptable for models with a CFI and TLI of ≥ 0.90 to 0.95 (Bentler, 1990), and RMSEA and SRMR > 0.06 to ≤ 0.08 (Browne & Cudeck, 1989).

Next, the first two hypotheses were analyzed by fitting a partial mediation model with direct paths from career competencies to perceived employability and objective and subjective career success as mediators between career competencies and perceived employability, and a full mediation model excluding the direct paths from career competencies to perceived employability. The mediating role of career success was tested using maximum likelihood estimation and 1000 bootstrap samples (Baron & Kenny, 1986).

Finally, we estimated the hypothesized moderated mediation model using the LMS approach (Maslowsky et al., 2015). We established a baseline model derived from the partial mediation model by adding direct effects between negative career shocks and perceived employability, and between positive career shocks and perceived employability. In this baseline model, the interaction is not estimated and therefore assumed to be zero. Next, we added latent interactions to estimate the full LMS model. To allow negative and positive career shocks to operate as moderators at the second stage of the mediated relationship, we created latent interactions between career success and both negative and positive career shocks. Since traditional fit indices used in structural equation modelling are not available for latent moderation analyses (Muthén & Muthén, 2015), we obtained fit indices from the baseline model, and compared the relative fit of the baseline model and the LMS model using a log-likelihood ratio test ($D = -2[(\log\text{-likelihood for Model 3}) - (\log\text{-likelihood for Model 4})]$). Degrees of freedom (df) were obtained by calculating the difference in the number of free parameters between the baseline model and the LMS model, and significance was determined using the chi-square distribution (Sardeshmukh & Vandenberg, 2017).

3. Results

3.1. Descriptive statistics

Table 1 shows the means, standard deviations, and correlations among the study variables. The majority of correlations between the model variables were in the hypothesized direction. In line with previous studies (Eby et al., 2003; Ng & Feldman, 2014) age, gender, educational level, work hours, and organizational tenure were correlated with career success. For this reason, these variables were included as control variables in the analyses.

3.2. Confirmatory factor analyses and measurement model

We conducted CFAs for each measurement instrument and subsequently evaluated whether the total measurement model fitted the data. Because a CFA model with three or fewer indicators is a just-identified model, in which the model fit is perfect irrespective of the pattern of loadings (Malhotra & Sharma, 2008), fit indices were not available for career competencies. The CFA of perceived internal employability showed adequate fit to the data, $\chi^2(2) = 9.63$, $p = .008$, CFI = 0.99, TLI = 0.99, RMSEA = 0.07 [0.03; 0.12], SRMR = 0.02, AIC = 7194. Initially, the CFAs for career satisfaction and perceived external employability did not show acceptable fit.¹ We correlated two indicators of career satisfaction (item 3 and item 4, $r = 0.65$) because these items were very similar in language, which resulted in a good model fit, $\chi^2(4) = 9.92$, $p = .04$, CFI = 0.99, TLI = 0.99, RMSEA = 0.05 [0.01; 0.09], SRMR = 0.01, AIC = 8715. The CFA of perceived external employability showed a linear dependency between item 1 (“I would easily find another job if I lost my job”) and item 2 (“I would find another job rather quickly if I would search for it”) ($r = 0.85$,

¹ Career satisfaction: $\chi^2(5) = 137.61$, $p < .001$, CFI = 0.92, TLI = 0.84, RMSEA = 0.19 [0.17; 0.22], SRMR = 0.05, AIC = 8844; perceived external employability: $\chi^2(2) = 477.57$, $p < .001$, CFI = 0.72, TLI = 0.16, RMSEA = 0.58 [0.54; 0.62], SRMR = 0.14, AIC = 6712.

Table 1
Means, standard deviations, and correlations among study variables ($N = 704$).

	<i>M</i>	<i>SD</i>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1. Age	29.45	3.13															
2. Gender ^a	0.74	0.44	−0.10 [*]														
3. Education ^b	5.05	1.15	−0.09 [*]	0.03													
4. Working hours (per week)	39.16	7.55	−0.06	−0.24 ^{**}	0.11 ^{**}												
5. Organizational tenure	3.34	2.80	0.55 ^{**}	−0.07	−0.28 ^{**}	−0.04											
6. Reflective career competencies	3.72	0.52	0.05	−0.04	0.02	0.15 ^{**}	0.01										
7. Communicative career competencies	3.14	0.63	−0.09 [*]	−0.07 [*]	0.04	0.20 ^{**}	−0.11 ^{**}	0.59 ^{**}									
8. Behavioral career competencies	3.19	0.70	−0.09 [*]	−0.04	0.07	0.18 ^{**}	−0.12 ^{**}	0.53 ^{**}	0.60 ^{**}								
9. Positive career shocks	5.11	3.14	0.02	0.02	−0.03	0.22 ^{**}	0.06	0.23 ^{**}	0.26 ^{**}	0.19 ^{**}							
10. Negative career shocks	3.26	2.06	0.09 [*]	0.06	0.01	0.02	−0.01	0.06	0.08 [*]	0.03	0.20 ^{**}						
11. Perceived external employability	3.30	0.80	0.06	−0.10 [*]	0.01	0.21 ^{**}	−0.01	0.18 ^{**}	0.28 ^{**}	0.27 ^{**}	0.22 ^{**}	−0.04					
12. Perceived internal employability	3.39	0.97	−0.18 ^{**}	−0.15 ^{**}	0.11 ^{**}	0.28 ^{**}	−0.11 ^{**}	0.19 ^{**}	0.29 ^{**}	0.31 ^{**}	0.20 ^{**}	−0.03	0.20 ^{**}				
13. Career satisfaction	3.25	0.83	−0.06	−0.01	0.06	0.25 ^{**}	0.02	0.30 ^{**}	0.40 ^{**}	0.39 ^{**}	0.42 ^{**}	0.01	0.16 ^{**}	0.38 ^{**}			
14. Salary	6.04	1.81	0.43 ^{**}	−0.15 ^{**}	0.16 ^{**}	0.40 ^{**}	0.29 ^{**}	0.13 ^{**}	0.17 ^{**}	0.14 ^{**}	0.30 ^{**}	0.08 [*]	0.18 ^{**}	0.13 ^{**}	0.36 ^{**}		
15. Promotions	1.58	1.58	0.35 ^{**}	−0.04	−0.20 ^{**}	0.10 ^{**}	0.37 ^{**}	0.15 ^{**}	0.11 ^{**}	0.04	0.30 ^{**}	0.04	0.10 ^{**}	0.11 ^{**}	0.26 ^{**}	0.37 ^{**}	
16. Positive performance appraisals	4.61	3.28	0.55 ^{**}	0.05	−0.27 ^{**}	0.03	0.51 ^{**}	0.15 ^{**}	0.04	0.01	0.18 ^{**}	0.03	0.11 ^{**}	−0.05	0.11 ^{**}	0.34 ^{**}	0.52 ^{**}

^{*} $p < .05$.

^{**} $p < .01$.

^a Gender was dummy-coded (0 = male, 1 = female).

^b Education categories include 0 = no education, 1 = lower general secondary education, 2 = higher secondary education, 3 = intermediate vocational education, 4 = higher vocational education, 5 = Bachelor, 6 = Master, and 7 = Ph.D.

$p < .001$), reflecting the fact that both items focus on finding employment (i.e., external quantitative employability dimension; De Cuyper & De Witte, 2011), contributing substantial duplicate variance to external perceived employability. This issue was solved by removing item 1 from the external employability indicators, after which the CFA for perceived external employability also resulted in a just-identified model. All factor loadings were significant to their respective latent constructs (all p 's $< .05$) and ranged from 0.39 to 0.94. There was one low factor loading of 0.28 for perceived internal employability, which was attributed to low variance. We retained the item because it still reached significance ($p < .05$) and removing this item resulted in reduced model fit. Based on the outcomes of the separate CFAs, we tested the total measurement model including all study variables. The measurement model fitted the data well, $\chi^2(83) = 266.07$, $p < .001$, CFI = 0.96, TLI = 0.95, RMSEA = 0.06 [0.05; 0.06], SRMR = 0.07, AIC = 23,924.

3.3. Hypotheses testing

In line with H1a and H1b, we found positive associations between career competencies and perceived internal employability ($\beta = 0.136$, $p < .001$) and external employability ($\beta = 0.161$, $p < .001$). Next, in line with H2, we tested whether subjective (H2a) and objective (H2b) career success would partially mediate the relationship between career competencies and perceived employability. The partial mediation model, with direct paths from career competencies to perceived employability and objective and subjective career success as mediators between career competencies and perceived employability, showed an adequate fit to the data, $\chi^2(176) = 661.92$, $p < .001$, CFI = 0.93, TLI = 0.90, RMSEA = 0.06 [0.06; 0.07], SRMR = 0.06, AIC = 29,901, whereas the full mediation model, excluding the direct paths from career competencies to perceived employability, showed a poor fit to the data, $\chi^2(178) = 694.52$, $p < .001$, CFI = 0.92, TLI = 0.89, RMSEA = 0.06 [0.06; 0.07], SRMR = 0.07, AIC = 29,930. As expected, the partial mediation model fitted the data better than the full mediation model ($\Delta\chi^2(2) = 32.56$, $p < .001$).

In line with our expectations, the results showed that subjective career success partially mediated the positive relationship between career competencies and perceived internal employability (standardized indirect effect: $\beta = 0.077$, $p < .001$, BCC: 0.038 to 0.117). Although the bivariate associations between career competencies, subjective career success, and perceived external employability were positive, in the partial mediation model including all latent variables (without career shocks added to the model), the relationship between career competencies and perceived external employability mediated by subjective career success was in the opposite direction as expected (standardized indirect effect: $\beta = -0.063$, $p = .020$, BCC: -0.117 to -0.010). Thus, H2a was partially supported. Objective career success did not mediate the relationship between career competencies and perceived internal employability (standardized indirect effects: promotions: $\beta = 0.007$, $p = .072$; salary: $\beta = -0.002$, $p = .594$; performance appraisals: $\beta = -0.002$, $p = .564$). In addition, there was no support for objective career success mediating the relationship between career competencies and perceived external employability (standardized indirect effects: promotions: $\beta = 0.000$, $p = .992$; salary: $\beta = -0.008$, $p = .289$; positive performance appraisals: $\beta = 0.007$, $p = .229$). Thus, H2b was not supported.

Because the partial mediation model showed adequate fit to the data, we proceeded by estimating the LMS models. First, we established a baseline model by adding a direct path between career shocks and perceived employability. This model showed adequate fit to the data, $\chi^2(211) = 900.56$, $p < .001$, CFI = 0.90, TLI = 0.86,² RMSEA = 0.06 [0.06; 0.07], SRMR = 0.07; AIC = 33,862. We proceeded to estimate the full LMS model by adding the moderating role of negative career shocks (H3a) and positive career shocks (H3b) at the second stage of the indirect relationship between career competencies and perceived employability via career success. Interaction terms were added using a step-wise approach, retaining only the significant interactions in the final LMS model. Fit indices showed that the LMS model including both negative and positive career shocks as moderators represents a significant improvement of fit relative to the baseline model ($D = -2[(-16,812.20) - (-16,797.56)] = 29.27$, $df = 122 - 119 = 3$, $p < .001$, AIC = 33,839). To corroborate this result, we compared the AIC values from the two models (Vandenberg & Grelle, 2009). Again, the LMS model was the best fitting model relative to the baseline model, as indicated by the smaller AIC ($\Delta AIC = -23$). Fig. 2 shows the standardized path coefficients of this final model.

H3a predicted that the indirect relationship between career competencies and perceived employability via career success would be weaker with increasing levels of negative career shocks. Results showed that negative career shocks moderated the indirect path between career competencies and perceived external employability via subjective career success ($\beta = 0.114$, $p < .001$, BCC: 0.064 to 0.165). Simple slopes analyses presented in Fig. 3 showed that the indirect relationship between career competencies and perceived external employability via subjective career success was significant at low ($-1SD$; $\beta = -0.331$, $p < .001$, BCC: 0.260 to 0.697), but not at high levels of negative career shocks ($+1SD$; $\beta = -0.034$, $p = .555$, BCC: -0.148 to -0.080). Thus, in line with H3a, the indirect relationship between career competencies and external employability via subjective career success is conditional upon negative career shocks, such that the path is weaker at high levels of negative career shocks.

H3b predicted that the indirect relationship between career competencies and perceived employability via career success would be stronger with increasing levels of positive career shocks. Positive career shocks moderated the indirect relationship between career competencies and perceived external employability via subjective career success ($\beta = -0.079$, $p = .001$, BCC: -0.128 to -0.031). The indirect relationship between career competencies and perceived external employability via career satisfaction is significant at high ($+1SD$; $\beta = -0.321$, $p < .001$, BCC: -0.469 to -0.173), but not low levels of positive career shocks ($-1SD$; $\beta = -0.084$,

² A low TLI value is not uncommon for baseline models in the LMS procedure (e.g., Mabbe, Soenens, Vansteenkiste, & Van Leeuwen, 2016). If the data holds disordinal interactions, the baseline model may not fit very well, in spite of a good measurement model (Sardeshmukh & Vandenberg, 2017). In such cases, adding the latent variable interactions to the full LMS model reduces the information loss, leading to a smaller AIC. The model with the lowest AIC is the best fitting model and should be retained.

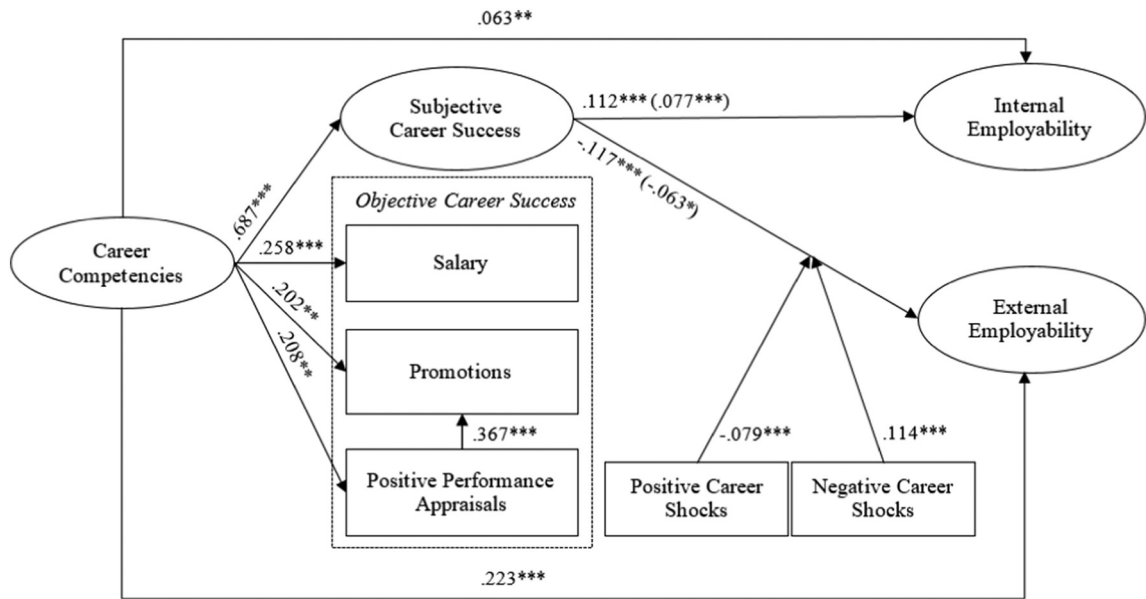


Fig. 2. Results of the latent moderated mediation model. For the sake of visual clarity, only statistically significant paths are shown. Values in parentheses represent indirect associations between career competencies and perceived employability through subjective and objective career success. All estimates are standardized. * $p < .05$, ** $p < .01$, *** $p < .001$.

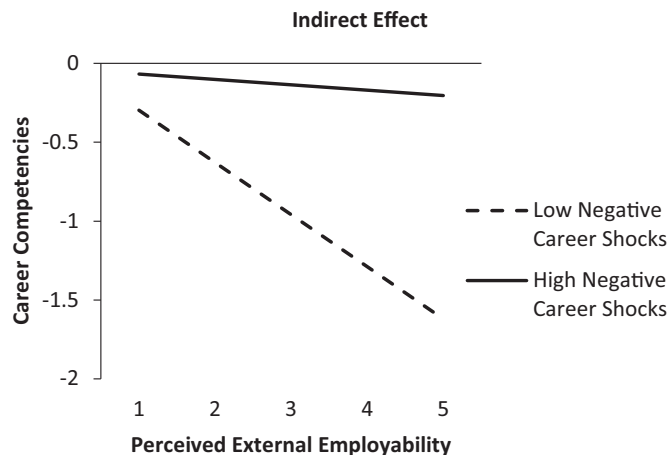


Fig. 3. Conditional indirect effect of career competencies on perceived external employability via subjective career success with negative career shocks. Standardized estimation; $N = 704$.

$p = .162$, BCC: -0.203 to 0.034). Fig. 4 shows that the indirect relationship between career competencies and perceived external employability via subjective career success is conditional upon positive career shocks, such that the path is stronger at high levels of positive career shocks. These results support H3b.

3.4. Additional analyses

To ensure that our research model was indeed the best fitting model, we examined a different sequential model in which career shocks moderate the first stage of the indirect relationship between career success and career competencies via perceived employability. Compared to the hypothesized model, both a full mediation model ($\Delta\chi^2(2) = 139.35$, $p < .001$, CFI = 0.90, TLI = 0.87, RMSEA = 0.07 [0.07; 0.08], SRMR = 0.09, AIC = 30,065) and a partial mediation model ($\Delta\chi^2(1) = 52.69$, $p < .001$, CFI = 0.92, TLI = 0.89, RMSEA = 0.07 [0.06; 0.07], SRMR = 0.07, AIC = 29,954) showed a poorer fit to the data. In addition, we tested whether career competencies moderated the indirect relationship between career shocks and perceived employability via career success. Again, compared to the hypothesized model, both a full mediation model ($\Delta\chi^2(28) = 104.88$, $p < .001$, CFI = 0.93, TLI = 0.89, RMSEA = 0.07 [0.06; 0.07], SRMR = 0.07, AIC = 28,577) and a partial mediation model ($\Delta\chi^2(30) = 83.51$, $p < .001$, CFI = 0.93, TLI = 0.89, RMSEA = 0.07 [0.06; 0.07], SRMR = 0.06, AIC = 28,574) showed poorer fit to the data. We therefore

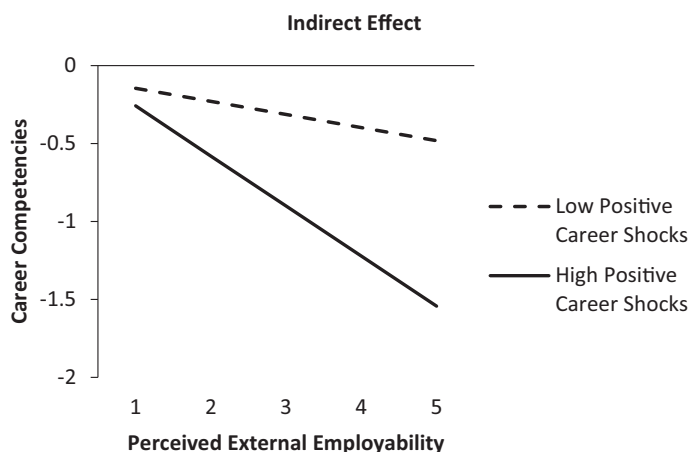


Fig. 4. Conditional indirect effect of career competencies on perceived external employability via subjective career success with positive career shocks. Standardized estimation; $N = 704$.

concluded that our hypothesized moderated mediation model is the most plausible model.

4. Discussion

The main aim of this study was to investigate the role of career competencies in achieving early career success and, subsequently, perceived employability among a group of young professionals. We used Career Construction Theory (CCT; Savickas, 2002, 2005) to examine whether career competencies may help young professionals construct their early career success and employability, and to which extent these relationships are moderated by career shocks. We found support for part of the hypothesized moderated mediation model. As expected, young professionals with high levels of career competencies perceived themselves to be more internally and externally employable, and this relationship was partially mediated by subjective (i.e., career satisfaction) career success. The results also showed that negative career shocks undermined the mediated relationship between career competencies and perceived external employability, whereas positive career shocks strengthened this relationship. Together, these findings support CCT by showing that the career construction process of young professionals evolved as an interaction between developing career resources and dealing with contextual factors.

4.1. Theoretical implications

Our results showed that the relationship between career resources and employability via career success is not straightforward. Young professionals who have developed high levels of career competencies were more satisfied with their career and, subsequently, perceived themselves to be more internally employable but less externally employable. This suggests that certain indicators of career success – in our case career satisfaction – relate to employees developing a stronger internal focus (e.g., organizational commitment and sense of job security) while at the same time relate to a weaker, or at least not stronger, orientation towards the external labor market. This is in line with prior research (e.g., De Cuyper & De Witte, 2011; Nauta, Vianen, Heijden, Dam, & Willemsen, 2009), and it would explain why career competencies and career success were not associated with higher perceptions of external employability. Namely, employees who are satisfied with their career (i.e., career satisfaction) thus far might be less likely to think about external opportunities. This might be especially applicable to our sample of young professionals. These young people typically have had only a few (or even one) employers in their career, which means that career satisfaction essentially equates to organizational satisfaction. If this is high, then they are not likely to actively pursue opportunities elsewhere, and/or to not even be aware of such opportunities to begin with.

Furthermore, although we expected that both objective and subjective career success would mediate the relationship between career competencies and perceived employability, our results showed that only subjective career success was a mediator in this model. This is in line with CCT's proposition that careers are a subjective construction in which individuals impose personal meaning on past memories, present experiences, and future aspirations by weaving them into their work life (Savickas, 2005). In all, these findings imply that it is important to distinguish between different types of career success and employability when examining their interrelations, and that especially subjective career success – as opposed to objective career success – may be relevant when considering employees' employability.

This study also offers new insight in the conditions under which career shocks are related to employability. Our findings showed that both positive and negative career shocks moderated the relationships between career competencies and perceived external employability, yet not with perceived internal employability. A potential explanation for this could be found in how young professionals evaluate career shocks; negative career shocks in particular may relate to people's vocational self-concept (e.g., thinking you are on the right track, but then unexpectedly losing one's job; Chen, 2005) and hence may serve as a “wake up call”, directing

attention towards external labor market opportunities. Similarly, positive career shocks may boost self-confidence, and subsequently strengthen perceptions of external opportunities (Savickas, 2002, 2005). The findings also imply that the career competencies – internal employability relationship may be primarily formed by individual agency and be less sensitive to contextual factors in the form of career shocks (cf. Akkermans et al., 2018).

Lastly, it is important to highlight that when studying perceived employability it is crucial to consider the state of the labor market in which the worker participates. For instance, if the general labor market is poor, it is likely that young professionals would perceive their employability to be low regardless of their career competencies and achieved success. Our results are therefore in particular applicable to countries with labor market conditions similar to that of the Dutch labor market (e.g., Germany, Austria, Switzerland, and Denmark). Future research is needed to examine whether our findings generalize to other labor market systems, such as the flexible labor market of other European countries.

In sum, the present study makes several contributions. First, we contribute to the literature on predictors of employability by showing that young professionals who have developed career competencies are more likely to have attained objective and subjective career success and perceived employability. These findings also provide support for Spurk et al.'s (2018) reasoning that immediately attained career success may serve as input for career-related outcomes, in this case employability. Second, answering calls for a more contextualized approach to career research (e.g., Akkermans & Kubasch, 2017; Inkson et al., 2012), we extend existing empirical work on CCT by including both career resources (i.e., career competencies) and contextual factors (i.e., career shocks) into a model of young professionals' employability. By doing so, we show that career shocks play an important role in young professionals' employability in tandem with career competencies and career success. Overall, this study underlines that future research studying the interplay between agentic and contextual factors is warranted.

4.2. Practical implications

The results of this study have practical implications for young professionals, HR managers, and career counselors. First, our study shows that career competencies are a career resource that is positively associated with attaining career success and employability. Thus, young professionals who invest in their career competency development are likely to also be better at laying the foundation for long-term success. At the same time, career shocks play an important role in this process as they interact with career competencies, and can enhance (positive shocks) or diminish (negative shocks) their role in career success and employability. This means that on top of continuously and proactively developing their career competencies, young professionals should invest in coping strategies, such as a flexible attitude towards change, a clear vision for the future, and perseverance in executing one's career plans (Chen, 2005).

HR managers and career counselors could use the findings of this study to facilitate young professionals in building their employability. Interventions, such as training and counseling programs, could empower young professionals to take charge of their careers and at the same time actively address the potential impact of career shocks on career development. More specifically, interventions focusing on the development of career resources and resilience could help young professionals prepare for career shocks, whereas guidance in effective perspective taking (i.e., reframing the meaning and implication of the career shock or re-evaluating one's vocational self-concept and career options) may provide support to those young professionals who have encountered career shocks.

4.3. Limitations

Some limitations of our study need to be addressed. First, this study employed a cross-sectional design and therefore no assumptions of causality can be drawn from the results. Given that career competencies and career success are theoretically connected to perceived employability, reciprocal relationships are possible in which previously attained career success might boost the development of perceived employability and this in turn could serve as new input for career success (e.g., De Vos et al., 2011; Van der Heijden, De Lange, Demerouti, & Van der Heijde, 2009). Therefore, the findings of this study should be complemented by studies using a longitudinal design.

Second, because a self-report survey was used to collect the data, common method bias might have inflated the relationships among the measured variables. However, this problem should be minimal given that the first-order correlations presented in Table 1 only show high intercorrelations for scales that are part of the same latent construct, and no other first-order correlations exceeded 0.50 (Podsakoff, MacKenzie, Lee, & Podsakoff, 2003). In addition, this study detected significant interaction effects even though interaction terms can be severely deflated through common method bias (Siemens, Roth, & Oliveira, 2010). This indicates that common method bias was probably not a serious issue in the present study.

Third, because sense-making plays an important role in the experience of career shocks and the development of perceived employability, it is important to check whether perceived employability corresponds with actual employment opportunities (i.e., positive career shock may encourage you to believe that you are employable, but in reality you are not that employable). Future research is needed to explore this question further and to validate our model. Additional methods, such as supervisor ratings and employment outcomes, could be used to check whether the changes we found in the distribution of young professionals' employability reflect a true impact on their employability.

Lastly, the present study used aggregated scores to examine the role of negative and positive career shocks in young professionals' perceived employability. Yet, it is important to note that career shocks are still a relatively new concept and more research is needed to identify which career shocks are relevant and how these shocks should be measured. First, regarding the conceptualization of

career shocks, it remains unclear, for example, how many shocks are needed to alter the career development process. Future research should explore the concept of career shocks further and empirically examine the effect of quantity, frequency, and intensity of career shocks on career outcomes (cf. Akkermans et al., 2018). For example, the relationship between career shocks, career success, and employability may differ for shocks that occur more often and are more intense, and there may be a certain threshold that needs to be surpassed before shocks shape the process of becoming employable. Such threshold effects have been alluded to but not empirically tested yet (e.g., Akkermans et al., 2018). Second, regarding the measurement of career shocks, it is important to note that a validated measurement instrument does not yet exist. While we used the scale of Seibert et al. (2013) as a foundation for the scale in this study, those authors already acknowledged that it is necessary to develop a thorough and valid measurement instrument. Therefore, we argue that this would be an important avenue for future research.

Declarations of interest

None.

References

- Akkermans, J., Brenninkmeijer, V., Huibers, M., & Blonk, R. W. B. (2013). Competencies for the contemporary career: Development and preliminary validation of the Career Competencies Questionnaire. *Journal of Career Development*, 40(3), 245–267. <https://doi.org/10.1177/0894845312467501>.
- Akkermans, J., Brenninkmeijer, V., Schaufeli, W. B., & Blonk, R. W. (2015). It's all about CareerSKILLS: Effectiveness of a career development intervention for young employees. *Human Resource Management*, 54(4), 533–551. <https://doi.org/10.1002/hrm.21633>.
- Akkermans, J., & Kubasch, S. (2017). # trending topics in careers: A review and future research agenda. *Career Development International*, 22(6), 586–627. <https://doi.org/10.1108/CDI-08-2017-0143>.
- Akkermans, J., Seibert, S. E., & Mol, S. T. (2018). Tales of the unexpected. Integrating career shocks in the contemporary career literature. *South African Journal of Industrial Psychology*, 44(0), a1503. <https://doi.org/10.4102/sajip.v44i0.1503>.
- Akkermans, J., & Tims, M. (2017). Crafting your career: How career competencies relate to career success via job crafting. *Applied Psychology*, 66(1), 168–195. <https://doi.org/10.1111/apps.12082>.
- Arthur, M. B., Khapova, S. N., & Wilderom, C. P. (2005). Career success in a boundaryless career world. *Journal of Organizational Behavior*, 26(2), 177–202. <https://doi.org/10.1002/job.290>.
- Baron, R. M., & Kenny, D. A. (1986). The moderator–mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations. *Journal of Personality and Social Psychology*, 51(6), 1173.
- Baruch, Y., & Lavi-Steiner, O. (2015). The career impact of management education from an average-ranked university: Human capital perspective. *Career Development International*, 20(3), 218–237. <https://doi.org/10.1108/CDI-08-2014-0117>.
- Baruch, Y., Wordsworth, R., Mills, C., & Wright, S. (2016). Career and work attitudes of blue-collar workers, and the impact of a natural disaster chance event on the relationships between intention to quit and actual quit behaviour. *European Journal of Work and Organizational Psychology*, 25(3), 459–473. <https://doi.org/10.1080/1359432X.2015.1113168>.
- Beaton, D. E., Bombardier, C., Guillemin, F., & Ferraz, M. B. (2000). Guidelines for the process of cross-cultural adaptation of self-report measures. *Spine*, 25(24), 3186–3191. <https://doi.org/10.1097/00007632-200012150-00014>.
- Bentler, P. M. (1990). Comparative fit indexes in structural models. *Psychological Bulletin*, 107(2), 238–246.
- Bridgstock, R. (2009). The graduate attributes we've overlooked: Enhancing graduate employability through career management skills. *Higher Education Research & Development*, 28(1), 31–44. <https://doi.org/10.1080/07294360802444347>.
- Bright, J. E., Pryor, R. G., Chan, E. W. M., & Rijanto, J. (2009). Chance events in career development: Influence, control and multiplicity. *Journal of Vocational Behavior*, 75(1), 14–25. <https://doi.org/10.1016/j.jvb.2009.02.007>.
- Bright, J. E., Pryor, R. G., & Harpham, L. (2005). The role of chance events in career decision making. *Journal of Vocational Behavior*, 66(3), 561–576. <https://doi.org/10.1016/j.jvb.2004.05.001>.
- Brislin, R. W. (1970). Back-translation for cross-cultural research. *Journal of Cross-Cultural Psychology*, 1, 185–216. <https://doi.org/10.1177/135910457000100301>.
- Browne, M. W., & Cudeck, R. (1989). Single sample cross-validation indices for covariance structures. *Multivariate Behavioral Research*, 24(4), 445–455.
- Chen, C. P. (2005). Understanding career chance. *International Journal for Educational and Vocational Guidance*, 5(3), 251–270. <https://doi.org/10.1007/s10775-005-3600-7>.
- Chkalova, K., van Genabeek, J., Sanders, J., Smits, W. (2017). Dynamiek op de Nederlandse arbeidsmarkt; De focus op ongelijkheid [Dynamics on the Dutch labor market: The focus on inequality]. Statistics Netherlands, De Hague, the Netherlands.
- Cleveland, J. N., Murphy, K. R., & Williams, R. E. (1989). Multiple uses of performance appraisal: Prevalence and correlates. *Journal of Applied Psychology*, 74(1), 130–135.
- Colakoglu, S. N. (2011). The impact of career boundarylessness on subjective career success: The role of career competencies, career autonomy, and career insecurity. *Journal of Vocational Behavior*, 79(1), 47–59. <https://doi.org/10.1016/j.jvb.2010.09.011>.
- De Cuyper, N., & De Witte, H. (2008). Gepercipieerde kans op een baan versus een betere baan: Relaties met arbeidstevredenheid en welzijn. *Gedrag en Organisatie*, 21(4), 475–492. <https://doi.org/10.1111/j.1464-0597.2008.00332.x>.
- De Cuyper, N., & De Witte, H. (2010). Temporary employment and perceived employability: Mediation by impression management. *Journal of Career Development*, 37(3), 635–652. <https://doi.org/10.1177/0894845309357051>.
- De Cuyper, N., & De Witte, H. (2011). The management paradox: Self-rated employability and organizational commitment and performance. *Personnel Review*, 40(2), 152–172. <https://doi.org/10.1108/00483481111106057>.
- De Cuyper, N. D., Bernhard-Oettel, C., Berntson, E., Witte, H. D., & Alarco, B. (2008). Employability and employees' well-being: Mediation by job insecurity. *Applied Psychology*, 57(3), 488–509.
- De Cuyper, N., Van der Heijden, B. I. J. M., & De Witte, H. (2011). Associations between employability and employee and organizational outcomes: A matter of psychological contracts? *International Journal of Human Resource Management*, 22, 1486–1503.
- De Vos, A., De Hauw, S., & Van der Heijden, B. I. (2011). Competency development and career success: The mediating role of employability. *Journal of Vocational Behavior*, 79(2), 438–447. <https://doi.org/10.1016/j.jvb.2011.05.010>.
- De Vos, A., Van Der Heijden, B., & Akkermans, J. (2018). Sustainable careers: Towards a conceptual model. *Journal of Vocational Behavior*. <https://doi.org/10.1016/j.jvb.2018.06.011>.
- Downey, R. G., & King, C. V. (1998). Missing data in Likert ratings: A comparison of replacement methods. *The Journal of General Psychology*, 125(2), 175–191.
- Eby, L. T., Butts, M., & Lockwood, A. (2003). Predictors of success in the era of the boundaryless career. *Journal of Organizational Behavior*, 24(6), 689–708.
- Edwards, J. R., & Lambert, L. S. (2007). Methods for integrating moderation and mediation: a general analytical framework using moderated path analysis. *Psychological Methods*, 12(1), 1–22. <https://doi.org/10.1037/1082-989X.12.1.1>.
- Eurostat (2018). Unemployment statistics. Retrieved from https://ec.europa.eu/eurostat/statistics-explained/index.php/Unemployment_statistics#Recent_developments.
- Fleisher, C., Khapova, S. N., & Jansen, P. G. (2014). Effects of employees' career competencies development on their organizations: Does satisfaction matter? *Career Development International*, 19(6), 700–717.
- Forrier, A., & Sels, L. (2003). The concept employability: A complex mosaic. *International Journal of Human Resources Development and Management*, 3(2), 102–124.

- Forrier, A., Sels, L., & Stynen, D. (2009). Career mobility at the intersection between agent and structure: A conceptual model. *Journal of Occupational and Organizational Psychology*, 82(4), 739–759.
- Forrier, A., Verbruggen, M., & De Cuyper, N. (2015). Integrating different notions of employability in a dynamic chain: The relationship between job transitions, movement capital and perceived employability. *Journal of Vocational Behavior*, 89, 56–64.
- Francis-Smythe, J., Haase, S., Thomas, E., & Steele, C. (2013). Development and validation of the career competencies indicator (CCI). *Journal of Career Assessment*, 21(2), 227–248.
- Fugate, M., Kinicki, A. J., & Ashforth, B. E. (2004). Employability: A psycho-social construct, its dimensions, and applications. *Journal of Vocational Behavior*, 65(1), 14–38.
- Gangl, M. (2002). Changing labour markets and early career outcomes: Labour market entry in Europe over the past decade. *Work, Employment and Society*, 16(1), 67–90.
- Greenhaus, J. H., Parasuraman, S., & Wormley, W. M. (1990). Effects of race on organizational experiences, job performance evaluations, and career outcomes. *Academy of Management Journal*, 33(1), 64–86.
- Grimland, S., Vigoda-Gadot, E., & Baruch, Y. (2012). Career attitudes and success of managers: The impact of chance event, protean, and traditional careers. *The International Journal of Human Resource Management*, 23(6), 1074–1094.
- Guest, D. E., Isaksson, K., & De Witte, H. (2010). Employment contracts, psychological contracts and employee well-being. *An international study*. Oxford: Oxford University Press.
- Guindon, M. H., & Hanna, F. J. (2002). Coincidence, happenstance, serendipity, fate, or the hand of God: Case studies in synchronicity. *The Career Development Quarterly*, 50(3), 195–208.
- Hall, D. T. (2004). The protean career: A quarter-century journey. *Journal of Vocational Behavior*, 65(1), 1–13.
- Hall, D. T., & Heras, M. L. (2010). Reintegrating job design and career theory: Creating not just good jobs but smart jobs. *Journal of Organizational Behavior*, 31(2–3), 448–462.
- Heslin, P. A. (2005). Conceptualizing and evaluating career success. *Journal of Organizational Behavior*, 26(2), 113–136.
- Hirschi, A. (2010). The role of chance events in the school-to-work transition: The influence of demographic, personality and career development variables. *Journal of Vocational Behavior*, 77(1), 39–49.
- Hirschi, A. (2012). The career resources model: An integrative framework for career counsellors. *British Journal of Guidance & Counselling*, 40(4), 369–383. <https://doi.org/10.1080/03069885.2012.700506>.
- Hobfoll, S. E., Halbesleben, J., Neveu, J.-P., & Westman, M. (2018). Conservation of resources in the organizational context: The reality of resources and their consequences. *Annual Review of Organizational Psychology and Organizational Behavior*, 5, 103–128. <https://doi.org/10.1146/annurev-orgpsych-032117-104640>.
- Holtom, B. C., Mitchell, T. R., Lee, T. W., & Inderrieden, E. J. (2005). Shocks as causes of turnover: What they are and how organizations can manage them. *Human Resource Management*, 44(3), 337–352.
- Inkson, K., Gunz, H., Ganesh, S., & Roper, J. (2012). Boundaryless careers: Bringing back boundaries. *Organization Studies*, 33(3), 323–340.
- Judge, T. A., Higgins, C. A., Thoresen, C. J., & Barrick, M. R. (1999). The big five personality traits, general mental ability, and career success across the life span. *Personnel Psychology*, 52(3), 621–652.
- Klein, A., & Moosbrugger, H. (2000). Maximum likelihood estimation of latent interaction effects with the LMS method. *Psychometrika*, 65(4), 457–474.
- Krumboltz, J. D. (1998). Counsellor actions needed for the new career perspective. *British Journal of Guidance and Counselling*, 26(4), 559–564.
- Kuijpers, M., & Scheerens, J. (2006). Career competencies for the modern career. *Journal of Career Development*, 32(4), 303–319.
- Mabbe, E., Soenens, B., Vansteenkiste, M., & Van Leeuwen, K. (2016). Do personality traits moderate relations between psychologically controlling parenting and problem behavior in adolescents? *Journal of Personality*, 84(3), 381–392.
- Malhotra, M. K., & Sharma, S. (2008). Measurement equivalence using generalizability theory: An examination of manufacturing flexibility dimensions. *Decision Sciences*, 39(4), 643–669.
- Maslowsky, J., Jager, J., & Hemken, D. (2015). Estimating and interpreting latent variable interactions: A tutorial for applying the latent moderated structural equations method. *International Journal of Behavioral Development*, 39(1), 87–96.
- Mayrhofer, W., Meyer, M., & Steyrer, J. (2007). Contextual issues in the study of careers. *Handbook of career studies* (pp. 215–240).
- McDonald, P. K. (2018). How ‘flexible’ are careers in the anticipated life course of young people? *Human Relations*, 71(1), 23–46.
- Müller, W., & Gangl, M. (2003). *Transitions from education to work in Europe: The integration of youth into EU labour markets*. Oxford University Press on Demand.
- Muthén, L., & Muthén, B. (2015). *Mplus. The comprehensive modelling program for applied researchers: User's guide*, 5.
- Nauta, A., Van Vianen, A., der Heijden, Van, Van Dam, K., & Willemsen, M. (2009). Understanding the factors that promote employability orientation: the impact of employability culture, career satisfaction, and role breadth self-efficacy. *Journal of Occupational and Organizational Psychology*, 82(2), 233–251. <https://doi.org/10.1348/096317908X320147>.
- Ng, T. W., & Feldman, D. C. (2014). A conservation of resources perspective on career hurdles and salary attainment. *Journal of Vocational Behavior*, 85(1), 156–168.
- Parker, P., Khapova, S. N., & Arthur, M. B. (2009). The intelligent career framework as a basis for interdisciplinary inquiry. *Journal of Vocational Behavior*, 75(3), 291–302.
- Podsakoff, P. M., MacKenzie, S. B., Lee, J.-Y., & Podsakoff, N. P. (2003). Common method biases in behavioral research: A critical review of the literature and recommended remedies. *Journal of Applied Psychology*, 88(5), 879–903.
- Rothwell, A., & Arnold, J. (2007). Self-perceived employability: Development and validation of a scale. *Personnel Review*, 36(1), 23–41.
- Sardeshmukh, S. R., & Vandenberg, R. J. (2017). Integrating moderation and mediation: A structural equation modeling approach. *Organizational Research Methods*, 20(4), 721–745. <https://doi.org/10.1177/1094428115621609>.
- Savickas, M. L. (2002). Career construction: A developmental theory of vocational behavior. *Career choice and development* (4 ed., pp. 205). San Francisco: Jossey-Bass.
- Savickas, M. L. (2005). The theory and practice of career construction. *Career Development and Counseling: Putting Theory and Research to Work*, 1, 42–70.
- Savickas, M. L., & Porfeli, E. J. (2012). Career Adapt-Abilities Scale: Construction, reliability, and measurement equivalence across 13 countries. *Journal of Vocational Behavior*, 80(3), 661–673.
- Seibert, S. E., Kraimer, M. L., Holtom, B. C., & Pierotti, A. J. (2013). Even the best laid plans sometimes go askew: Career self-management processes, career shocks, and the decision to pursue graduate education. *Journal of Applied Psychology*, 98(1), 169–182. <https://doi.org/10.1037/a0030882>.
- Siemsen, E., Roth, A., & Oliveira, P. (2010). Common method bias in regression models with linear, quadratic, and interaction effects. *Organizational Research Methods*, 13(3), 456–476. <https://doi.org/10.1177/1094428109351241>.
- Singh, R., Ragins, B. R., & Tharenou, P. (2009). Who gets a mentor? A longitudinal assessment of the rising star hypothesis. *Journal of Vocational Behavior*, 74(1), 11–17. <https://doi.org/10.1016/j.jvb.2008.09.009>.
- Spurk, D., Hirschi, A., & Dries, N. (2018). Antecedents and outcomes of objective versus subjective career success: Competing perspectives and future directions. *Journal of Management*, 0149206318786563. <https://doi.org/10.1177/0149206318786563>.
- Statistics Netherlands (2018). *Bevolking: hoogstbehaald onderwijsniveau en onderwijsrichting*. Retrieved from <https://opendata.cbs.nl/statline/#/CBS/nl/dataset/82816NED/table?ts=1547548503751> (February 26).
- Stumpf, S. A. (2014). A longitudinal study of career success, embeddedness, and mobility of early career professionals. *Journal of Vocational Behavior*, 85(2), 180–190.
- Tomlinson, J., Baird, M., Berg, P., & Cooper, R. (2018). Flexible careers across the life course: Advancing theory, research and practice. *Human Relations*, 71(1), 4–22.
- Tomlinson, M., & Holmes, L. (2017). *Graduate employability in context: Theory, research and debate*. London, United Kingdom: Springer.
- Van der Heijde, C. M., & van der Heijden, B. I. (2006). A competence-based and multidimensional operationalization and measurement of employability. *Human Resource Management*, 45(3), 449–476.
- Van der Heijden, B. I., De Lange, A. H., Demerouti, E., & Van der Heijde, C. M. (2009). Age effects on the employability–career success relationship. *Journal of Vocational Behavior*, 74(2), 156–164.
- Vandenberg, R. J., & Grelle, D. M. (2009). Alternative model specifications in structural equation modeling. Statistical and methodological myths and urban legends: Doctrine, verity and fable in the organizational and social sciences, 165–191.
- Wille, B., De Fruyt, F., & Feys, M. (2013). Big five traits and intrinsic success in the new career era: A 15-year longitudinal study on employability and Work–Family conflict. *Applied Psychology*, 62(1), 124–156. <https://doi.org/10.1111/j.1464-0597.2012.00516.x>.
- Wittekind, A., Raeder, S., & Grote, G. (2010). A longitudinal study of determinants of perceived employability. *Journal of Organizational Behavior*, 31(4), 566–586.